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Organic Semiconductors for Next Generation Organic Photovoltaics

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Stellingen behorende bij het proefschrift

**Organic Semiconductors
for Next Generation Organic Photovoltaics**
door
Solmaz Torabi

1. Oligo (ethylene glycol) side chains not only serve as solubilizing moieties but also carry the functionality of increased polarity for enhancing the dielectric constant of organic materials.
2. The dielectric constant of the film of a fullerene derivative can become doubled due to the doping impact of only 1nm LiF deposited onto it.
3. For thin film capacitors, the simple parallel plate capacitor formula should be replaced by an extended formula in which the roughness of the electrodes is taken into account.
4. On the way from material design to organic solar cells with improved performance, there is a maze to be negotiated with an overwhelming number of paths.
5. Many applications of nano-electronic devices can benefit from increased dielectric constant of organic semiconductors.
6. Extensive computational studies should complement experimental investigations to better understand the link between materials properties in solid state and their dielectric constant.
7. Failure reports are largely missing from the scientific literature.
8. Scientific posters without beauty are visual pollution that impair researcher's ability to enjoy walking in science corridors.